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EXAMINER

PANNALA, SATHYANARAYA R

ART UNIT PAPER NUMBER

2164

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/996,495

Applicant(s)

KADLECIK ET AL.

Examiner

Sathyanarayan Pannala

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 11-19 and 23-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-19 and 23-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Applicant's Amendment filed on 11/2/2005 has been entered. The claims 1-9, 11-19 and 23-31 are pending in this Office Action.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 103(a) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-9, 11-19 and 23-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Burk et al. ("UNIX System Administrator's Edition", 1997) hereinafter Burk and in view of Deitel et al. ("C & C++ Multimedia Cyber Classroom", 1996) hereinafter Deitel.

4. As per independent claim 1, APA (Admitted Prior Art) has stated as FIND and GREP commands are two search tools, which are used to search files for selected text (page 1, paragraph 002). Burk teaches the same commands in more details available in UNIX operating system. Burk teaches "identifying text of a computer program to be searched by a search tool used in debugging the computer program outside of a

compile phase of the computer program” the GREP command to search the text (Page 174, Examples). Deitel et al. teaches for example, whenever `#include` statement is part of computer program, then the preprocessor looks for is the file enclosed in angle brackets or quotes. If the file is enclosed in angle brackets, the preprocessor considers as a standard binary header file and searches for specified file in the system predefined directories. If the file is enclosed in quotes then the preprocessor searches first in the same directory as the file being compiled, then in the same manner as file enclosed in angle brackets (page 802, item 17.2).

Thus, it would have been obvious to one of ordinary skill in the data processing art, at the time of the present invention to have, combined the teachings of the cited references because Deitel's teachings would have allowed Burk's method searches for the specified computer program and the specified file in an implementation manner (see Deitel, page 802, paragraph last).

Further, Burk teaches “searching for the text by the search tool in a targeted item at a targeted location associated with the computer program” file-name and directory-name are provided to search in the specific directory for the file-name. The target item is the file-name/computer program-name and the target location is the directory where the file is located (page 145).

Further, Burk teaches “determining whether one or more additional items are to be searched for the text, said determining using one or more language specific rules of the computer program to determine whether one or more additional items are to be searched. wherein the determining is defined by the computer program” by repeating

the command to search will find other terms needed to search (page 145). Additionally, on the basis of the current specification, the operating system used is AIX, which is one form of UNIX operating system. One of the UNIX based programming language is C. The computer program listed in the current specification is written in C. The programming language Software packages provide several search tools to search a computer program in order debug. For example Visual C/C++ package provides several customized tools and as well as Borland C/C++ provides there customized search tools for program debugging. Deitel teaches “searching for the text by the search tool in at least one additional item of the one or more additional items. In response to said determining indicating that one or more additional items are to be searched” as this limitation is also programming language based. For example, in C language, using `#include` statement the search is done in the standard directory or a pre-specified directory. The search will be a two-step process, first searches for `#include` statement(s) and the next step, looks for angle brackets. If the file is enclosed in angle brackets, as they are used for standard library header files. Then the search tool searches for the specified file in the C/C++ language pre-designated directories (page 802, item 17.2).

5. As per dependent claim 2, Burk further teaches “the determining is absent user specification of the one or more additional items”

**for example, `grep -i -n '#include' filename`**

will search for all include statements in the user specification file and prints with the line number and will not print any line if #include (additional items) are in the specification (page 174).

6. As per dependent claim 3, Burk further teaches “the one or more additional items comprise one or more files” as per the specification” for example, find . -name “test\*” – print will search for all filenames (one or more) start with test and printed on the screen (page 148).

7. As per dependent claim 4, Burk further teaches “the one or more additional items comprise one or more classes”. Examiner considering the technical dictionary meaning of class as a group of objects in object-oriented programming languages. There is no difference from searching the name of the class. Whether you are searching for a string/word or a class name within a computer program, GREP command searches, for example, GREP dummy file1 to find all occurrences of dummy (page 174, Examples). However, Deitel also teaches “the one or more items comprise one or more classes” as the a header file containing declarations and definitions common to the separate programs file is often created and included in the file. For example of such declarations and definitions are classes (page 803, lines 3-6). Thus, it would have been obvious to one of ordinary skill in the data processing art, at the time of the present invention to have, combined the teachings of the cited references because Deitel’s teachings would

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have allowed Burk's method searches for the specified computer program and the specified file in an implementation manner (see Deitel, page 802, paragraph last).

8. As per dependent claim 5, Burk further teaches "further comprises choosing one or more locations (directories) associated with the computer program in which the one or more additional items to be searched are to be included, wherein locations not associated with the computer program are not chosen" for example find /home filename will search for files in the home directory (page 726) and Filenames are computer program names with specific extension to the file name based on the programming language.

9. As per dependent claim 6, Burk teaches "the one or more locations comprise one or more directories" for example find /home/directory1 filename will search for files in the directory1 directory. The other directory above it is home directory (page 726).

10. As per dependent claim 7, Burk teaches "the one or more locations are designated by an environment variable used in compiling the computer program" as in the disclosure, the INCLUDE statement indicates where to look for the environment file which is same as searching for the file in the specific directory and that directory may be subdirectory for another directory, for example ./test2/test21 (page 148).

11. As per dependent claim 8, Burk teaches “the choosing is based on one or more rules of a programming language of the computer program” computer program code files are stored in with programming language specific extensions, for example C program files are stored as “filename.c whereas compiled files are stored as filename.o” (page 146).

12. As per dependent claim 9, Burk teaches “the text is referenced by the computer program, but not defined within the computer program” as in the disclosure, the INCLUDE statement indicates where to look for the environment file which is same as searching for the file in the specific directory and that directory may be subdirectory for another directory, for example ./test2/test21 (page 148).

13. As per independent claim 11. APA (Admitted prior art) has stated FIND and GREP commands are two search tools, that are used to search files for selected text (page 1, paragraph 002). Burk explains the same commands in more details available in UNIX operating system. Burk teaches “a search tool used in debugging the computer program outside of a compile phase of the computer program to search for the text of the computer program, said search tool adapted” grep as a search tool, used out side the compilation phase of the computer program to search for the text in the program (page 174). Burk teaches “search for the text in a targeted item at a targeted location associated with the computer program” file-name and directory-name are provided to search in the specific directory for the file-name. The target item is the file-



name/computer program-name and the target location is the directory where the file is located (page 145).

Burk teaches “determine whether one or more additional items are to be searched for the text, the determining using one or more language specific rules of the computer program to determine whether one or more additional items are to be searched, wherein the determining is defined by the computer program” by repeating the command to search will find other terms needed to search (page 145). Additionally, on the basis of the current specification, the operating system used is AIX, which is one form of UNIX operating system. One of the UNIX based programming language is C. The computer program listed in the specification is written in C. The programming language Software packages provide several search tools to search a debugging program. For example Visual C/C++ package provides several customized tools and as well as Borland C/C++ provides, their customized search tools for program debugging.

Burk does not explicitly list a computer program. However, Deitel teaches “text of a computer program to be searched” the text of the program is listed (page 565, item 11.9). Thus, it would have been obvious to one of ordinary skill in the data processing art, at the time of the present invention to have, combined the teachings of the cited references because Deitel’s teachings would have allowed Burk’s method searches for the specified computer program and the specified file in an implementation manner (see Deitel, page 802, paragraph last).

Deitel teaches “search for the text in at least one additional item of the one or more additional items, in response to said determining indicating that one or more

additional items are to be searched” as this limitation is also programming language based. For example, in C language, using `#include` statement the search is done in the standard directory or a pre-specified directory. The search is a two-step process, first search for `#include` statement and the next step, looks for angle brackets. If the file is enclosed in angle brackets and they are used for standard library header files. Then the search tool searches for the specified file in the C/C++ language pre-designated directories (page 802, item 17.2).

14. As per dependent claim 12, Burk further teaches “the search tool is adopted to determine absent user specification of the one or more additional items”

**for example**, `grep -i -n '#include' filename`

will search for all include statements in the user specification file and prints with the line number and will not print any line if `#include` (additional items) are in the specification (page 174).

15. As per dependent claim 13, Burk further teaches “the one or more additional items comprise one or more files” for example, `find . -name "test*" -print` will search for all filenames (one or more) start with test and printed on the screen (page 148).

16. As per dependent claim 14, Burk further teaches “the one or more additional items comprise one or more classes.” Examiner considering the technical dictionary meaning of class is a group of objects in object-oriented programming languages. There

is no difference from searching the name of the class and a text. Whether you are searching for a string/word or a class name within a computer program, GREP command searches, for example, GREP dummy file1 to find all occurrences of dummy (page 174, Examples).

17. As per dependent claim 15, Burk teaches “the search tool is further adapted to choose one or more locations (directories) associated with the computer program in which the one or more additional items to be searched are to be included, wherein locations not associated with the computer program are not chosen” for example find /home filename will search for files in the home directory and Filenames are computer program names with specific extension to the file name based on the programming language (page 726).

18. As per dependent claim 16, Burk teaches “the one or more locations comprise one or more directories” for example find /home/directory1 filename will search for files in the directory1 directory. The other directory above it is home directory (page 726).

19. As per dependent claim 17, Burk teaches “the one or more locations are designated by an environment variable used in compiling the computer program” as in the disclosure, the INCLUDE statement indicates where to look for the environment file which is same as searching for the file in the specific directory and that directory may be subdirectory for another directory, for example ./test2/test21 (page 148).

20. As per dependent claim 18, Burk teaches “the choosing is based on one or more rules of a programming language of the computer program” computer program code files are stored in with programming language specific extensions, for example C program files are stored as “filename.c whereas compiled files are stored as filename.o” (page 146).

21. As per dependent claim 19, Burk further teaches “the text is referenced by the computer program, but not defined within the computer program” as in the disclosure, the INCLUDE statement indicates where to look for the environment file which is same as searching for the file in the specific directory and that directory may be subdirectory for another directory, for example ./test2/test21 (page 148).

22. Burk anticipated the independent claim 23, APA has stated FIND and GREP commands are two popular search tools in UNIX operating system, that are used to search files for selected text (page 1, paragraph 002). Burk explains the same commands in more details. Burk teaches “identifying text of a computer program to be searched by a search tool used in debugging the computer program outside of a compile phase of the computer program” the GREP command to search the text (Page 174, Examples). Deitel et al. teaches for example, whenever #include statement is part of computer program, then the preprocessor looks for is the file enclosed in angle brackets or quotes. If the file is enclosed in angle brackets, the preprocessor considers

as a standard binary header file and searches for specified file in the system predefined directories. If the file is enclosed in quotes then the preprocessor searches first in the same directory as the file being compiled, then in the same manner as file enclosed in angle brackets (page 802, item 17.2).

Thus, it would have been obvious to one of ordinary skill in the data processing art, at the time of the present invention to have, combined the teachings of the cited references because Deitel's teachings would have allowed Burk's method searches for the specified computer program and the specified file in an implementation manner (see Deitel, page 802, paragraph last).

Further, Burk teaches "searching for the text by the search tool in a targeted item at a targeted location associated with the computer program" file-name and directory-name are provided to search in the specific directory for the file-name. The target item is the file-name/computer program-name and the target location is the directory where the file is located (page 145).

Further, Burk teaches, "determining whether one or more additional items are to be searched for the text, said determining using one or more language specific rules of the computer program to determine whether one or more additional items are to be searched. wherein the determining is defined by the computer program" by repeating the command to search will find other terms needed to search (page 145). Additionally, on the basis of the current specification, the operating system used is AIX, which is one form of UNIX operating system. One of the UNIX based programming language is C. The computer program listed in the current specification is written in C. These

programming language Software packages provide several search tools to search a debugging program. For example, Visual C/C++ package provides several customized tools and as well as Borland C/C++ provides, their customized search tools for program debugging. Deitel teaches “searching for the text by the search tool in at least one additional item of the one or more additional items. In response to said determining indicating that one or more additional items are to be searched” as this limitation is also programming language based. For example, in C language, using #include statement the search is done in the standard directory or a pre-specified directory. The search will be a two-step process, first searches for #include statement and the next step, looks for angle brackets. If the file is enclosed in angle brackets used for standard library header files. Then the search tool searches for the specified file in the C/C++ language pre-designated directories (page 802, item 17.2).

23. As per dependent claim 24, Burk further teaches “the determining is absent user specification of the one or more additional items”

**for example**, `grep -i -n '#include' filename`

will search for all include statements in the user specification file and prints with the line number and will not print any line if #include (additional items) are in the specification (page 174).

24. As per dependent claim 25, Burk further teaches “the one or more additional items comprise one or more files ” as per the specification” for example, `find . -name`

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"test\*" –print will search for all filenames( one or more) start with test and printed on the screen (page 148).

25. As per dependent claim 26, Burk further teaches "the one or more items additional comprise one or more classes ". Examiner considering the technical dictionary meaning of class is a group of objects in object-oriented programming languages. There is no difference from searching the name of the class. Whether you are searching for a string/word or a class name within a computer program, GREP command searches, for example, GREP dummy file1 to find all occurrences of dummy (page 174, Examples).

26. As per dependent claim 27, Burk further teaches "choosing one or more locations (directory) associated with the computer program in which the one or more additional items to be searched are to be included, wherein locations not associated with the computer program are not chosen" for example find /home filename will search for files in the home directory (page 726) and Filenames are computer program names with specific extension to the file name based on the programming language.

27. As per dependent claim 28, Burk further teaches "the one or more locations comprise one or more directories" as in the disclosure, the INCLUDE statement indicates where to look for the environment file which is same as searching for the file in

the specific directory and that directory may be subdirectory for another directory, for example ./test2/test21 (page 148).

28. As per dependent claim 29, Burk further teaches "the one or more locations are designated by an environment variable used in compiling the computer program " as in the disclosure, the INCLUDE statement indicates where to look for the environment file which is same as searching for the file in the specific directory and that directory may be subdirectory for another directory, for example ./test2/test21 (page 148).

29. As per dependent claim 30, Burk further teaches " the choosing is based on one or more rules of a programming language of the computer program " computer program code files are stored in with programming language specific extensions, for example C program files are stored as "filename.c whereas compiled files are stored as filename.o" (page 146).

30. As per dependent claim 31, Burk further teaches "the text is referenced by the computer program, but not defined within the computer program " as in the disclosure, the INCLUDE statement indicates where to look for the environment file which is same as searching for the file in the specific directory and that directory may be subdirectory for another directory, for example ./test2/test21 (page 148).



***Response to Arguments***

31. Applicant's arguments filed on 11/2/2005 with respect to claims 1-9, 11-19 and 23-31 have been considered but they are not persuasive and details as follows:

a) Applicant's argument states as "Applicants submit that Deitel is improperly cited against the present application as nonanalogous art."

In response to the Applicant's argument, Examiner feels strongly that the prior art by Deitel is analogous. Deitel is considered as the one of the computer professional and very knowledgeable. UNIX Operating System is used to execute C and C++ programs. In fact the UNIX Operating System is written in C language. Therefore, who ever teaches C and C++ programming languages will also teach important UNIX commands.

b) In response to applicant's argument that Deitel is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

Prior art, specially the reference teaches claims and its limitations. Applicants' are claiming the claim 1 negatively even though search tools in the current invention are meant for debugging a computer program. Further, from background of the current invention, the search tools **find** and **grep** are not

dependent on the language but they are used to get information from the computer source code, data and as well as data core dump (memory information at the time of error in executing a program). These tools are provided for the use of UNIX operating system. Applicants' specification (page 5, lines 3-5) supports AIX operating system, which is originated from UNIX. Similar to **Find** command used in WINDOWS 95 to find files or text in any document.

c) Applicant's argument states as "Moreover, the substantively cited section 17.2 of Dietel concerns a directive for file search and insert in preprocessing whereas GREP in Burk is directed to text searching in computer programs."

In response to the Applicant's argument, Examiner respectfully disagrees once again because of misinterpretation of **#include** statement. In C/C++ program code, the statement **starts with** **#include** and followed by a file name for preprocessing. But reference used for claim 2 is using the GREP command to restrict a specific path is totally in different situation. GREP command is combined with **#include**. So, every UNIX operating system book will teach **grep** and **find** search tools. Claiming improperly for search tools to debug a computer program using the rules of a computer programming language. Popular C/C++ computer language Software packages provided by MICROSOFT Corporation and BORLAND Computers provide special tools for search and to do other activities. These tools are not meant for part of the compiler and they provided as features of the software to facilitate debugging a computer program.

Further, in response to the Applicant's argument, Examiner emphasizes that the applicant discussed in the background of the specification about **Find** and **Grep** tools and claiming a better tool. But there is no supporting, definite and concrete evidence is provided in the specification to overcome the deficiencies of existing search tools. A person of an ordinary skills in the data processing art knows that the **Find tool is used to search files** and **Grep tool is used to search within files** and another tool **xargs is useful to search a combination** (page 491, item 18.5, "Teach yourself UNIX in a week", by David Taylor, publisher, SAMS Publishing, 1994). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sathyanarayan Pannala  
Examiner  
Art Unit 2164

srp  
January 11, 2006

  
**MOHAMMAD ALI**  
**PRIMARY EXAMINER**